## ABSTRACT OF THE INVENTION

The present invention relates to replication competent variants of mammalian immunodeficiency virus comprising mutations and/or deletions of the V3 hypervariable loop and compensatory mutations, as well as methods for producing such variants. The invention also relates to V3-loop deletion mammalian immunodeficiency virus mutants that have compensatory mutations, deletions of the V1/V2 loops, or both. The invention further relates to isolated Env, gp120 polypeptides, and gp41 polypeptides comprising novel mutations useful in conjunction with, or separate from, a virus of the invention, as well as nucleic acids encoding the same.

5